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Nebraska Monthly Economic Indicators: May 16, 2014

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Nebraska Monthly Economic Indicators: May 16, 2014

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Summary: *The Leading Economic Indicator – Nebraska (LEI-N) rose by 1.89% during April 2014. The rise in the LEI-N, which predicts economic growth in the state six months in the future, suggests solid growth in the Nebraska economy in the second half of 2014. Among the growing components of the leading economic indicator, there was a sharp drop in initial unemployment claims, suggesting solid improvement in labor market conditions. There also was solid improvement in business expectations. Specifically, respondents to the Survey of Nebraska Business predicted an increase in sales and employment at their business over the next six month. At the same time, building permits for single-family homes rose on a seasonally adjusted basis and there was a decline in the value of the U.S. Dollar. This decline in the dollar is a positive for Nebraska’s exporters. Among the remaining components of the leading indicator, there was a modest decline in both manufacturing hours and airline passenger counts.*

Leading Economic Indicator – Nebraska

Figure 1 shows the change in the Leading Economic Indicator – Nebraska (LEI-N) in April 2014, compared to the previous month. The LEI-N predicts economic growth six months into the future. The LEI-N rose rapidly in April, by 1.89%.

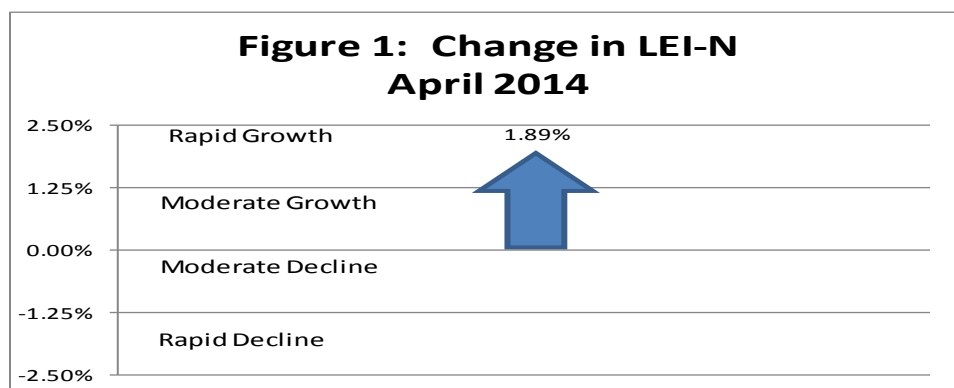


Figure 2 shows the change in the LEI-N over the last 6 months. While there was volatility in the leading indicator during late 2013 and early 2014, the outlook was positive on balance. Further, the leading indicator has risen in each of the last three months, including the rapid increase this month. Note that the positive LEI-N value for March 2013 reflects a modest upward revision from the slightly negative value reported last month.

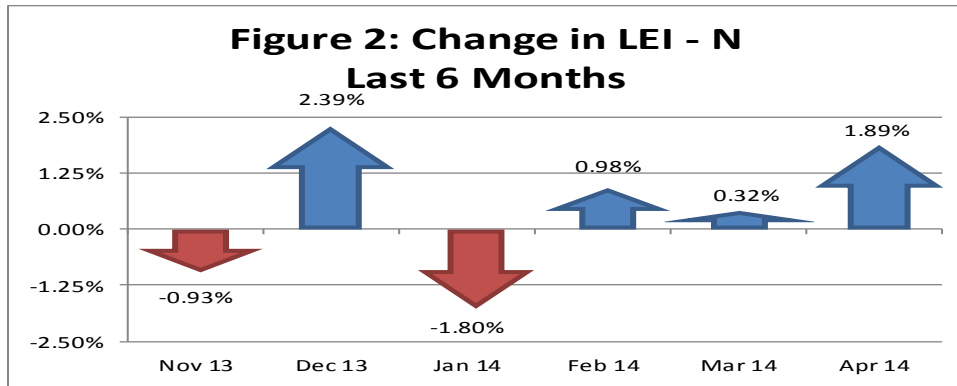
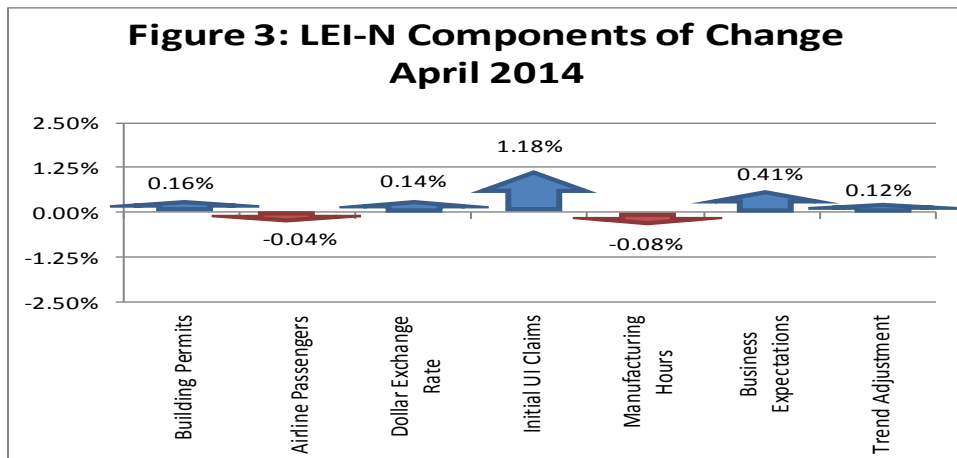
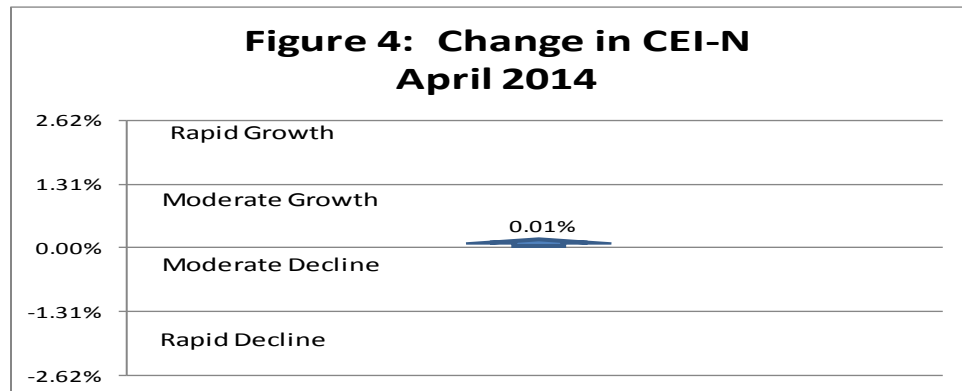


Figure 3 shows the components of change in the Leading Economic Indicator – Nebraska during April 2014. The change in the overall LEI-N is the weighted average of changes in each component (see page 5). During April, four components of the LEI-N rose and two declined. There was a sharp decline in initial unemployment claims, which is a solid positive signal for the labor market. At the same time, business expectations improved in April as respondents to the *Survey of Nebraska Business* predicted an increase in both sales and employment over the next six months. There also was an increase in single-family building permits in April, even after seasonal adjustment. A declining value for the U.S. dollar also improved the competitive position of Nebraska exporters. Only two components of the LEI-N declined in April. There was a slight decline in manufacturing hours and seasonally-adjusted airline passenger counts. Note that the trend adjustment component pictured in Figure 3 is discussed on page 5.

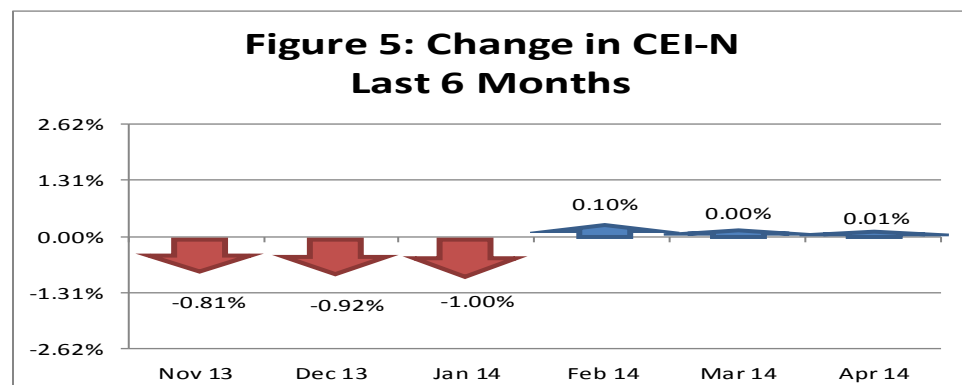


Coincident Economic Indicator – Nebraska

The Coincident Economic Indicator - Nebraska (CEI-N) is a measure of the current size of the Nebraska economy. As seen in Figure 4, the CEI-N was essentially flat last month, rising by just 0.01%.



The very slight increase in the CEI-N during April is a further sign of stabilization in the Nebraska economy. As seen in Figure 5, the CEI-N dropped consistently from November 2013 through January 2014, as the Nebraska economy continued to adjust to the sharp drop in the crop prices during the summer and fall of 2013. The Nebraska economy then stabilized over the last three months. We note that the CEI-N is expected to expand over most of the next 6 months (see Figure 7).



As seen in Figure 6, three components of the CEI-N rose during April while one declined. There was solid improvement in real private wages, electricity sales and commodity prices. Real weekly private wages grew during the month, suggesting growth in employment opportunities, hours-worked per week and real wages. Electricity sales rose modestly in April after accounting for weather and other seasonal adjustments. Agricultural commodity prices also rose, due to a solid increase in corn prices and sustained high beef prices. Only one component of the CEI-N declined during April. Specifically, respondents to the *Survey of Nebraska Business* reported a decline in sales and employment in recent months. A detailed discussion of the components of the CEI-N, as well as the LEI-N, can be found at www.cba.unl.edu in *Technical Report: Coincident and Leading Economic Indicators- Nebraska*.

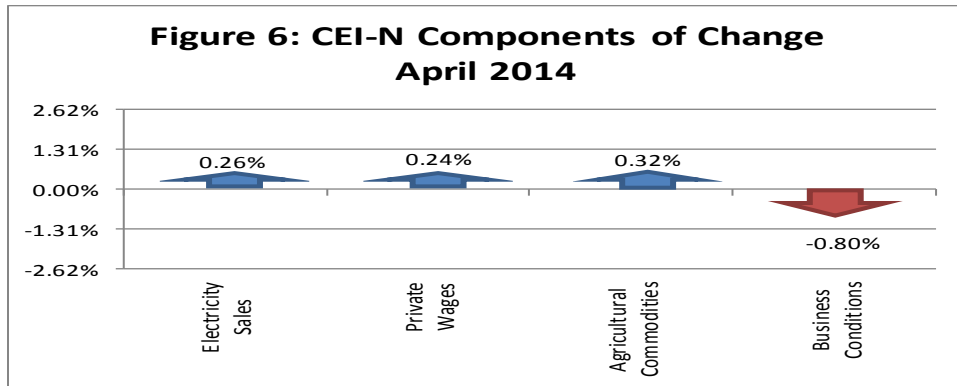
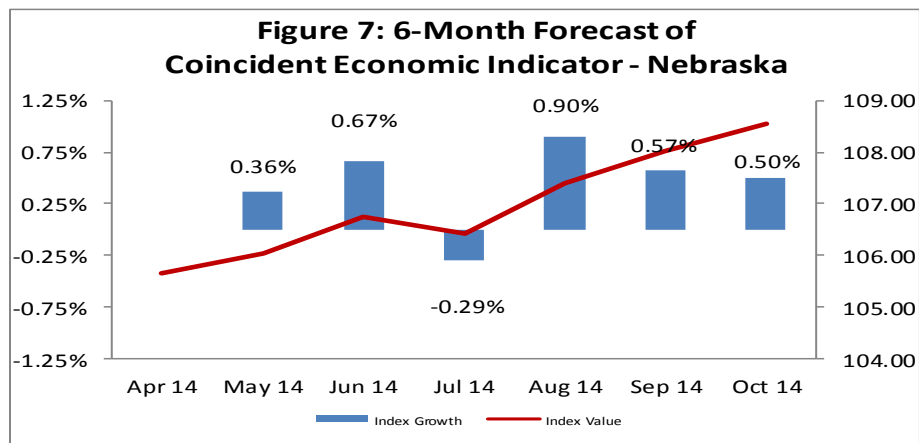


Figure 7 shows the forecast for the CEI-N over the next six months. The forecast suggests moderate growth in the CEI-N over the next few months and solid growth in the Nebraska economy beginning in August. This expectation is consistent with recent values for the LEI-N (see Figure 2).



Weights and Component Shares

Table 1 shows the weights that were used to aggregate the individual components into the LEI-N and CEI-N. The weights are the inverse of the “standardized” standard deviation of each component variable. The term standardized simply means that the inverse standard deviations are adjusted proportionately to sum to 1. This weighting scheme makes sense since individual components that are more stable have smaller standard deviations, and therefore, a larger inverse standard deviation. A large movement in a typically stable economic series would provide a more powerful signal of economic change than a large movement in a series that regularly has large movements.

Table 1: Component Weights for LEI-N and CEI-N							
Leading Economic Indicator - Nebraska				Coincident Economic Indicator - Nebraska			
Variable	Standard Deviation	Inverse STD	Weight (Inverse STD Standardize)	Variable	Standard Deviation	Inverse STD	Weight (Inverse STD Standardize)
SF Housing Permits	13.8896	0.0720	0.0331	Electricity Sales	4.9065	0.2038	0.1487
Airline Passengers	3.5483	0.2818	0.1294	Private Wages	1.7049	0.5865	0.4278
Exchange Rate	1.2010	0.8326	0.3824	Agricultural Commodities	3.1151	0.3210	0.2341
Initial UI Claims	10.3076	0.0970	0.0446	Survey Business Conditions	3.8509	0.2597	0.1894
Manufacturing Hours	1.4823	0.6746	0.3098				
Survey Business Expectations	4.5622	0.2192	0.1007				

Tables 2 and 3 show the calculation for the change in CEI-N and LEI-N between March and April of 2014. Weights (from Table 1) are multiplied by the change to calculate the contribution of each component. Contributions are converted to percentage terms and summed. Note that in Table 2 a trend adjustment factor is utilized in calculating LEI-N. This is done because LEI-N historically under-predicts CEI-N by 0.12% per month. The U.S. Leading Economic Indicator also has a trend adjustment.

Table 2: Component Contributions to the Change in Leading Economic Indicator						
Leading Economic Indicator - Nebraska						
Component Index Value (May 2007=100)						
Component	Current	Previous	Difference	Weight	Contribution	Percentage Contribution (Relative to Previous LEI-N)
SF Building Permits	66.10	60.97	5.13	0.03	0.17	0.16%
Airline Passengers	93.29	93.65	-0.36	0.13	-0.05	-0.04%
U.S. Dollar Exchange Rate (Inverse)	101.77	101.37	0.41	0.38	0.16	0.14%
Initial Unemployment Insurance Claims (Inverse)	101.23	72.56	28.67	0.04	1.28	1.18%
Manufacturing Hours	95.09	95.37	-0.28	0.31	-0.09	-0.08%
Survey Business Expectations ¹	54.40		4.40	0.10	0.44	0.41%
Trend Adjustment					0.13	0.12%
Total (weighted average)	110.30	108.26			2.04	1.89%

¹ Survey results are a diffusion Index, which is always compared to 50

Table 3: Component Contributions to the Change in Coincident Economic Indicator						
Coincident Economic Indicator - Nebraska						
Component Index Value (May 2007=100)						
Component	Current	Previous	Difference	Weight	Contribution	Percentage Contribution (Relative to Previous CEI-N)
Electricity Sales	119.36	117.55	1.82	0.15	0.27	0.26%
Private Wage	97.38	96.80	0.58	0.43	0.25	0.24%
Agricultural Commodities	144.83	143.39	1.44	0.23	0.34	0.32%
Survey Business Conditions ¹	45.55		-4.45	0.19	-0.84	-0.80%
Total (weighted average)	105.65	105.64			0.01	0.01%

¹ Survey results are a diffusion Index, which is always compared to 50

Performance of the LEI-N and CEI-N

Further information is available on both economic indicators to demonstrate how well the CEI-N tracks the Nebraska economy and how well the LEI-N leads the CEI-N. Figure 8 shows the value of CEI-N and the real gross state product (real GDP) in Nebraska for 2001 through 2012. The comparison ends in 2012 since this is the last year for which data on real gross state product is available. Annual real gross state product data is provided by the Bureau of Economic Analysis, U.S. Department of Commerce, and quarterly values were estimated using quarterly earnings data. CEI-N closely tracks Nebraska real GDP for the period. The correlation coefficient between the two pictured series is 0.96.

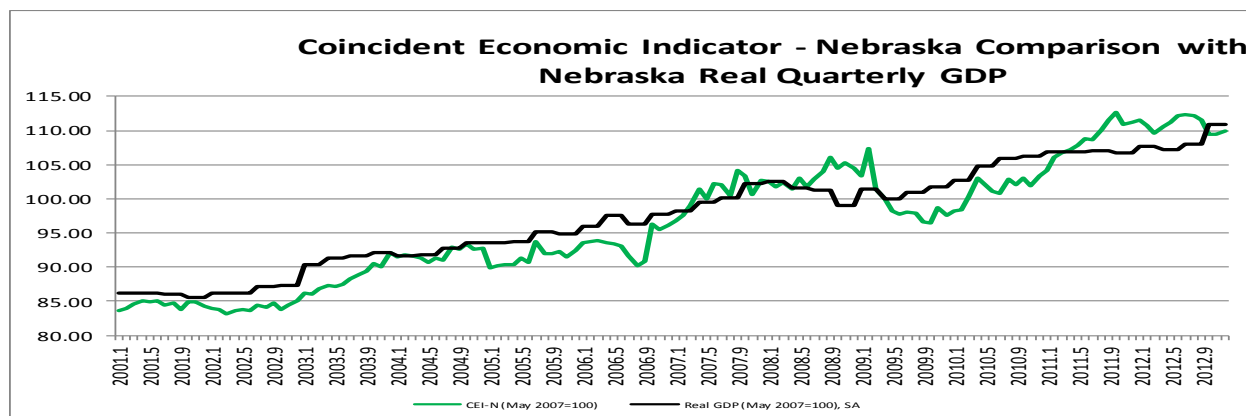


Figure 9 again shows the values for the CEI-N. It also graphs 6-months forward values for the LEI-N. Recall that the LEI-N is intended to forecast the Nebraska economy six months into the future. This implies that Figure 9 is comparing the predicted movement in CEI-N (predicted by LEI-N values six months earlier) with the actual movement in CEI-N. In Figure 9, predicted values using the LEI-N closely track trends and movement in the CEI-N. The correlation coefficient between CEI-N and six-month forward values of LEI-N is 0.91.

